

KidWind: Wind Power and Renewable Energy 2015-2016 Scale-Up Program

Overview: KidWind's program of training, materials, and student events empowers educators and students to dig deep into renewable energy STEM concepts.

Grade Levels: 2-12

Program Summary

KidWind proposes a program to bring effective renewable energy STEM training to educators through its REcharge Labs and provide students with hands-on applications of their knowledge with the KidWind Renewable Energy Festival and the Online Renewable Energy Challenge. Learn more here <http://kidwind.org/workshops/iowa-stem/2014/>.

- **Training**—REcharge Labs will cover the integration of wind and solar topics into grades 2-12 and the use of all kits and materials. While all the training is introductory, educators will be separated into two levels: Elementary School and Middle/High School.
- **Materials**—Once educators have attended the training, they will be able to select the materials that work best for their situation. These materials include wind and solar kits and data collection and support materials and tools to do the activities. These kits can be from KidWind, Recharge, and Vernier.
- **Festivals and Online Challenges**—Educators will be asked to demonstrate the use of their materials by participating in an Online Challenge or Renewable Energy Festival in their region. These events allow students to share their projects in supportive and engaging environment.

Project Description/Objectives

- Improve educators' understanding of renewable energy STEM concepts and introduce them to a suite of standards-based activities and lessons;
- Generate student excitement and interest in STEM fields—especially amongst historically underrepresented populations—through collaborative, creative, hands-on renewable energy design competitions;
- Introduce students to relevant, real-world applications of STEM processes behind renewable energy issues;
- And, encourage students to build connections between STEM concepts and social, economic, environmental, and cultural issues as they relate to renewable energy.

What does the project provide?

- A full-day of professional development training will be offered during the summer of 2015. Applicants must attend training to receive materials stipends. **Training in Iowa will occur the first two weeks of August. Dates will be finalized by March 1, 2015.** Educators need only to attend one day of training.
- After the training, educators will be able to select materials they wish to use in their classrooms. Elementary-level educators receive a budget of \$600. Middle and high school-level educators will receive a budget of \$1600.
- These materials will be used with students to participate in an event or online KidWind Energy Festival.
- Educators who have attended a REcharge Lab will have access to curriculum, online video, PowerPoints, and other educational support resources through a web portal.
- Educators and students will have access to the KidWind Renewable Energy Online Challenge competition website for teams to document and upload their submissions.
- Office hours are Monday through Friday, 9 a.m. to 5 p.m. by phone with after hours web support.

What is required by the applicant in order to implement this program?

- **August** – Attend a one-day REcharge Lab Training in your region. Before attending this training, applicants must submit their signed and submitted an agreement.
- **August** – Select kits to use and implement. The deadline to return order forms for materials is August 31, 2015.
- **September** – Materials are delivered and support is provided by KidWind as needed.
- **October to February** – Implementation of activities.
- **February to May** – Participate in the Online Renewable Energy Challenge or KidWind Renewable Energy Festival held in your region.

Website to View Program and Standards Alignment: http://learn.kidwind.org/workshops_events/iowa/stem-scale-up

Program Video: <http://vimeo.com/116185065>